

## HUMAN FAST-1 GENE

### ABSTRACT OF THE DISCLOSURE

*hFAST-1* is a human forkhead activin signal transducer gene. The hFAST-1 protein has the ability to bind to human Smad2 and activate an activin response element (ARE). The hFAST-1-dependent activation of ARE is dependent on endogenous Smad4 and stimulation of the TGF- $\beta$  receptor. The hFAST-1 protein binds to a novel DNA motif, TGT(G/T)(T/G)ATT, which is present within the ARE. This motif is important for the activation of genes responsive to ligands of the TGF- $\beta$  family. The invention includes tools for investigating the TGF- $\beta$  signaling pathway and screening for compounds which modulate the action of TGF- $\beta$ .